

P-4.10 Distinguish between the function of motors and generators on the basis of the use of electricity and magnetism by each

Revised Taxonomy Level 4.1B Distinguish conceptual knowledge

Key Concepts

Motors, generators, electromagnetic induction

It is essential for students to

- ❖ Diagram a motor and a generator, showing the parts of each, how they operate, and their functions.
- ❖ Illustrate the ways that motors and generators are similar
- ❖ Illustrate the ways that motors and generators are different.
- ❖ Summarize the concepts of electricity and magnetism which are the foundation for the functioning of motors and generators

Assessment

As the verb for this indicator is differentiate (distinguish), the major focus of assessment should be for students to distinguish between the relevant and irrelevant parts or important from unimportant parts of presented materials. Because the verb is differentiate rather than compare, students should assess the functioning of motors and generators to determine how electricity and magnetism are used for the functioning of each. Because the indicator is written as conceptual knowledge, assessments should require that students understand the “interrelationships among the basic elements within a larger structure that enable them to function together.” In this case, assessments must show that students understand how magnets and motors differ in terms of form and function